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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,547	12/09/2003	Andrzej J. Chandusko	106586-154 US2	4546

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WILMER CUTLER PICKERING HALE AND DORR LLP  
60 STATE STREET  
BOSTON, MA 02109

EXAMINER

POUS, NATALIE R

ART UNIT PAPER NUMBER

3731

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/731,547

Applicant(s)

CHANDUSZKO ET AL.

Examiner

Natalie Pous

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/4/05, 7/6/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS: 5/24/04.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-7, 9, 10, 14-19, 23 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Neuss et al. (US 6355052).

Regarding Claim 1, Neuss teaches an apparatus comprising: a patent foramen ovale (PFO) closure device having a deployed configuration (fig. 2) for providing compressive force to septum primum and septum secundum and including: a central body (5) for extending through the PFO, a first end cap (2), and first and second loops

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(each formed of wire 1, see fig. 3) on one side of the PFO, each of the first and second loops extending from the central body to the first end cap (fig. 3), each of the first and second loops defining a plane substantially parallel to septum primum and septum secundum such that the first and second loops apply a force, perpendicular to the plane, to one of septum primum and septum secundum (Column 4, proximate lines 58-65).

Regarding Claim 2, Neuss teaches the apparatus of claim 1, further comprising, on the other side of the PFO, a plurality of struts extending radially from the central body (fig. 11a) and having ends (14) for contacting one of septum primum and septum secundum.

Regarding Claim 3, Neuss teaches the apparatus of claim 1, further comprising, on the other side of the PFO, a second end cap (25), and third and fourth loops on one side of the PFO (fig. 2), each of the third and fourth loops extending from the central body to the first end cap and second end cap, each of the third and fourth loops defining a plane substantially parallel to septum primum and septum secundum such that the first and second loops apply a force, perpendicular to the plane, to one of septum primum and septum secundum (fig. 3).

Regarding Claim 4, Neuss teaches the apparatus of claim 3, where there are three or more loops on each side of the PFO (there are four elements 1, making 4 loops on each side).

Regarding Claim 5, Neuss teaches the apparatus of claim 3, wherein the central body and the first and second end caps are oriented in a line substantially perpendicular to septum primum and septum secundum (fig. 2).

Regarding Claim 6, Neuss teaches the apparatus of claim 1, wherein the device has a collapsed configuration for delivery through a catheter (fig. 7).

Regarding Claim 7, Neuss teaches the apparatus of claim 6, wherein the device includes nitinol (Column 6, proximate line 26).

Regarding Claim 9, Neuss teaches the apparatus of claim 6, wherein the device is made from a shape memory material with properties such that the device, when delivered into a body, has a phase transition and assumes the deployed configuration (Column 6, proximate lines 20-41).

Regarding Claim 10, Neuss teaches the apparatus of claim 1, wherein the device is retrievable, redeployable, and repositionable (Column 7, proximate lines 45-50).

Regarding Claims 14, 15, 16, 17, 18, 19, Neuss teaches a method comprising delivering the PFO closure device of claims 1, 2, 3, 4 and 10 through a catheter (figs. 7-8) to a PFO (Column 7 and Column 8, proximate lines 57-67 and 1-27 respectively), and further teaches wherein the device includes a shape memory material (Column 6, proximate lines 20-41).

Regarding Claim 23, Neuss teaches an apparatus comprising: a septal defect closure device having a deployed configuration for providing compressive force to septum primum and septum secundum secundum (Column 4, proximate lines 58-65) and including: a central body (5) for extending through the defect, a first end cap (2),

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and first and second loops (formed of wires 1) on one side of the defect, each of the first and second loops extending from the central body to the first end cap, each of the first and second loops defining a plane substantially parallel to septum primum and septum secundum such that the first and second loops apply a force, perpendicular to the plane, to one of septum primum and septum secundum (fig. 3).

Regarding Claim 24, Neuss teaches a method comprising delivering the closure device of claim 23 through a catheter (28) to a septal defect (Column 7 and Column 8, proximate lines 57-67 and 1-27 respectively).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 11-13 and 20-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Neuss in view of Huebsch et al. (US 6117159)

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Neuss teaches all limitations of preceding dependent claim 1, and further teaches the following:

- wherein the loops are made of a bioresorbable material (Column 6, line 24).
- a method comprising delivering the PFO closure device through a catheter (28) to a PFO (Column 7 and Column 8, proximate lines 57-67 and 1-27 respectively)

Neuss fails to teach a material over the first and second loops for promoting tissue ingrowth. Huebsch teaches a septal defect closure device wherein the device is covered in a material to promote tissue ingrowth in order to help with stabilization of the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Neuss with a material to promote tissue ingrowth in order to help with stabilization of the device.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Neuss and Huebsch as applied to claims 1, 11 and 12 above, and further in view of Shaw et al (US 6171329).

The combination of Neuss and Huebsch teaches all limitations of preceding dependent claims 1, 11 and 12 as previously described, and Neuss further teaches repositioning the device using a repositioning mechanism (Column 7, proximate lines 45-50). The combination of Neuss and Huebsch fails to teach drawing the device back into the catheter during the repositioning step. Shaw teaches a method of closing a septal defect comprising drawing the device back into the catheter during the repositioning step in order to aid in repositioning the device and placing it in the correct position. It would have been obvious to one of ordinary skill in the art at the time the

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invention was made to modify the combination of Neuss and Huebsch with the step of drawing the device back into the catheter during the repositioning step in order to aid in repositioning the device and placing it in the correct position.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neuss in view of Rulz (US 5976174). Neuss teaches all limitations of preceding dependent claim 1, and further teaches wherein the device is formed of a shape memory material, but fails to teach wherein the device includes a shape memory polymeric material. Rulz teaches a septal closure device wherein the device is formed of a shape memory polymeric material. It would have been an obvious matter of design choice to form the device of Neuss with a shape memory polymer as taught by Rulz since applicant has not disclosed that a polymer provides any advantage over Nitinol, and it appears that both materials perform the task of actuating to a second configuration when deployed in the body equally well.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie Pous whose telephone number is (571) 272-6140. The examiner can normally be reached on Monday-Friday 8:00am-5:30pm, off every 2nd Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NRP  
8/25/06

  
ANH TUAN T. NGUYEN  
SUPERVISORY PATENT EXAMINER  
9/4/06.